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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,995	02/20/2004	Robert S. Whitehouse	14074-014001	4368
26161	7590	04/05/2006	EXAMINER	
FISH & RICHARDSON PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			RONESI, VICKEY M	
			ART UNIT	PAPER NUMBER

1714

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/783,995

Applicant(s)

WHITEHOUSE, ROBERT S.

Examiner

Vickey Ronesi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9-11, 13-29 and 36-82 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-11, 13-29 and 36-82 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. All outstanding objections and rejections, except for those given below, have been withdrawn in light of applicant's amendment filed 1/25/2006.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.
3. The new grounds of rejection set forth below are necessitated by applicant's amendment filed 1/25/2006. In particular, the second PHA has been amended to necessarily include particular comonomers. Thus, the following action is properly made final.

Claim Objections

4. Claims 1, 36-43, 59, 63, and 75-77 are objected to for the following reasons:

With respect to claims 1, 59, and 63, "6-hydroxyhexanoate" is misspelled and should read as "6-hydroxyhexanoate."

With respect to claims 36-43 and 75-77, the molecular weight lacks basis. The specification defines the molecular weight as weight-average molecular weight and thus should be recited in the claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. Claims 1, 11, 13-29, 59, 63-67, 78, and 80 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 11, the term “the other comonomer” lacks antecedent basis.

With respect to claims 1, 59, 63, and 80, the phrase “one of the first and second comonomers is selected from the group consisting of” (emphasis added) is indefinite since it is not clear whether or not both first and second comonomers are selected from the subsequently recited Markush group.

With respect to claims 13-29, 64-67, and 78, the scope of the claims is indefinite since it appears that the defined comonomer of claim 1 is broadened in scope by claims 13-29. Specifically comonomers 2-A and 2-B can be comonomers other than those defined in claim 1.

Claim Rejections - 35 USC § 102/103

6. Claims 1-7, 9-11, 13-15, 25-29, 44-50, 52-55, 57-66, 68, 69, 74, and 78-80 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Lee et al (US 5,395,919).

Lee et al discloses a blend of poly-4-hydroxybutyrate (PHB, i.e., first PHA) and a new poly-β-hydroxyalkanoate (PHA, i.e., second PHA) wherein the amount of PHA is exemplified to be from 7.6-56.9 wt % (col. 9, lines 35-57; col. 14, lines 1-26). The PHA contains monomers such as 3-hydroxybutyrate, 3-hydroxyhexanoate, 3-hydroxyoctanoate, 3-hydroxydecanoate, 3-hydroxydodecanoate, and 3-hydroxy-10-dodecenoate (Table 1 in cols. 6-7; col. 15, lines 1-16). The blend is used in various articles (col. 10, lines 8-14).

Lee et al does not expressly disclose the glass transition temperature or Hansen solubility of its PHAs, nevertheless, given that the copolymers of Lee et al are the same utilized in the present invention, they would therefore inherently exhibit the presently claimed properties since

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a material and its properties are inseparable. Moreover, while Lee et al does not disclose the properties of its blend composition such as deformation angle tolerance, stiffness, and peel bond strength, these properties are considered to be inherent given that Lee et al teaches that beneficial mechanical properties are obtained by blending (col. 9, lines 35-57) and further given that Lee et al discloses the presently claimed ingredients in the blend composition. Case law holds that a material and its properties are inseparable. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

In light of the above, it is clear that Lee et al anticipates the presently cited claims.

Alternatively, the presently claimed blend properties of deformation angle tolerance, stiffness, and peel bond strength would obviously have been present once the Lee et al product is obtained.

7. Claims 1-7, 9, 13, 14, 36, 44-49, 52-56, 58-64, 75, 78-81 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Noda et al (US 6,808,795).

Noda et al discloses a blend comprising 5-95 wt % (col. 6, lines 36-40) PHA copolymers of 3-hydroxybutyrate and those of formulas (II) and (III) which read on the presently claimed PHA copolymers having a molecular weight of at least 150,000 (col. 4, lines 1-65); 5-95 wt % (col. 8, lines 15-21) environmentally degradable PLA polymers or copolymers which are substantially compatible with the PHA (col. 6, lines 43-53) having a molecular weight of at least 10,000 (col. 7, lines 49-58); and additives (col. 8, lines 22-50). Example 1 contains 30-90 wt % PLA (i.e., first PHA) and 10-70 wt % PHA copolymer of 4-hydroxybutyrate and 3-

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hydroxyhexanoate (i.e., second PHA) (col. 14, lines 44-64). The blend is soft and pliable. The blend is use to make a variety of articles (col. 14, lines 1-39).

Noda et al does not expressly disclose the glass transition temperature or Hansen solubility of its PHAs, nevertheless, given that the copolymers of Noda et al are the same utilized in the present invention, they would therefore inherently exhibit the presently claimed properties since a material and its properties are inseparable. Moreover, while Noda et al does not disclose the properties of its blend composition such as deformation angle tolerance, stiffness, and peel bond strength, these properties are considered to be inherent given that Noda et al teaches that the blend is soft and pliable and further given that Noda et al discloses the presently claimed ingredients in the blend composition. Case law holds that a material and its properties are inseparable. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

In light of the above, it is clear that Lee et al anticipates the presently cited claims.

Alternatively, the presently claimed blend properties of deformation angle tolerance, stiffness, and peel bond strength would obviously have been present once the Noda et al product is obtained.

Claim Rejections - 35 USC § 103

8. Claims 1-7, 9, 13, 14, 20-29, 36-50, 52-56, 58-64, and 75-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noda et al (US 6,808,795).

The discussion with respect to Noda et al in paragraph 7 above is incorporated here by reference.

While Noda et al exemplifies a blend of PLA and a PHA copolymer of 4-hydroxybutyrate and 3-hydroxyhexanoate, it also teaches use of a multitude of other PLA and PHA copolymers having various molecular weights. It is therefore considered that it would have been obvious to one of ordinary skill in the art to utilize any one of the polymers taught by Noda et al in amounts and having molecular weights like presently claimed, including PHA ter- and hexapolymers, thereby intrinsically obtaining the polymer properties and blend properties like presently claimed.

9. Claims 1-37, 44-73, and 78-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hammond (US 5,646,217).

Hammond discloses a polymer composition comprising a first polyester component containing PHA which is either a homo- or copolymer containing more than 2 monomers (col. 1, lines 32-55) and a second polyester component containing a similar or different PHA from the first PHA (col. 2, lines 13-47), wherein each component is present in an amount of 5-90 wt % by weight of the composition (col. 3, lines 6-10). The PHAs are of formula I and can be terpolymers (col. 1, lines 35-55). The polyester components are either compatibilized (i.e., miscible or partially miscible) (col. 5, lines 19-28) or not compatibilized (i.e., immiscible) (col. 3, line 66-67). Hansen teaches that beneficial mechanical properties are obtained (col. 3, lines 60-61)

While Hammond does not exemplify a PHA polymer containing comonomers other than 3-hydroxybutyrate and 3-valerate, Hammond teaches in Formula I the use of a multitude of PHAs in its blend. It is therefore considered that it would have been obvious to one of ordinary

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skill in the art to utilize any of the polymers taught by Hammon in a blend, thereby intrinsically obtaining the polymer properties and blend properties like presently claimed.

Response to Arguments

10. Applicant's arguments have been considered but are moot in view of the new grounds of rejection.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Contact Information

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

4/3/2006

Vickey Ronesi



Vasu Jagannathan
VASU JAGANNATHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700